

ABSTRACT OF THE DISCLOSURE

A reciprocating piston engine (or motor) includes plural reciprocating pistons operatively connected to a single intermediate oscillating shaft, and a crankshaft having a single crank pin operatively connected to the oscillating shaft, so that the crankshaft experiences one complete revolution for each back-and-forth reciprocation of the pistons. The connection between the pistons and the oscillating shaft can include a rack-pinion drive system or a link-lever drive system. The connection between the oscillating shaft and the crankshaft can include a sector gear in mesh with a toothed rack that operates a connecting rod attached to the crank pin; alternately a lever-connecting rod drive mechanism can be used between the oscillating shaft and the crankshaft.